CDC FluView Weekly Report
Laboratory-Confirmed Influenza Hospitalizations
Application Quick Reference Guide

Introduction

This Quick Reference Guide provides guidance on using the FluView web application and gives an overview of the influenza hospitalization surveillance network (FluSurv-NET).

This application is part of the CDC FluView report, which provides weekly information about the United States Influenza season. This report contains information about cases and laboratory results reported through various systems and includes indicators such as influenza-like illness (ILI) activity. This application was developed to address the Influenza Division's priorities regarding enhanced communication with clinicians, scientists, and the general public. The CDC FluView report can be accessed at http://www.cdc.gov/flu/weekly/.

About the Data

The source data for influenza hospitalizations application originates from two influenza surveillance networks:

The Emerging Infections Program (EIP) has conducted ongoing population-based influenza-hospitalization surveillance since the 2003-2004 season. EIP sites include counties within CA, CO, CT, GA, MD, MN, NM, NY, OR, and TN.

The Influenza Hospitalization Surveillance Project (IHSP) began during the 2009-2010 season to enhance surveillance during the 2009 H1N1 Pandemic. IHSP sites included counties within IA, ID, MI, OK, and SD during 2009-2010 season; ID, MI, OH, OK, RI, and UT during the 2010-2011 season; MI, OH, RI, and UT during the 2011-2012 season; IA, MI, OH, RI, and UT during the 2012-2013 season; and MI, OH, and UT during the 2013-2014 seasons and later.

Influenza Hospitalization Surveillance Network (FluSurv-NET) - FluSurv-NET encompasses both networks: EIP and IHSP. FluSurv-NET conducts population-based surveillance for laboratory-confirmed influenza-associated hospitalizations in children (persons younger than 18 years) and adults. The current network covers over 70 counties in the 10 Emerging Infections Program (EIP) states (CA, CO, CT, GA, MD, MN, NM, NY, OR, and TN) and three additional states (MI, OH, and UT). The network represents approximately 9% of US population (~27 million people).

Cases are identified by reviewing hospital laboratory and admission databases and infection control logs for patients hospitalized during the influenza season with a documented positive influenza test (i.e., viral culture, direct/indirect fluorescent antibody assay (DFA/IFA), rapid influenza diagnostic test (RIDT), or molecular assays, including reverse transcription-polymerase chain reaction (RT-PCR)).

Data gathered are used to estimate age-specific hospitalization rates on a weekly basis, and describe characteristics of persons hospitalized with severe influenza illness. Laboratory-confirmation is dependent on clinician-ordered influenza testing. Therefore, the rates provided are likely to be underestimated as influenza-related hospitalizations can be missed, either because testing is not performed, or because cases may be attributed to other causes of pneumonia or other common influenza-related complications.

Note: FluSurv-NET hospitalization data are preliminary and subject to change as more data become available.

Accessing the FluView Web-Based Application

All FluView applications are accessible by the public on the World Wide Web. To access the FluView laboratory-confirmed influenza hospitalizations web application, you will first need to open a web browser on your computer and go the following internet link: http://gis.cdc.gov/GRASP/Fluview/FluHospChars.html.

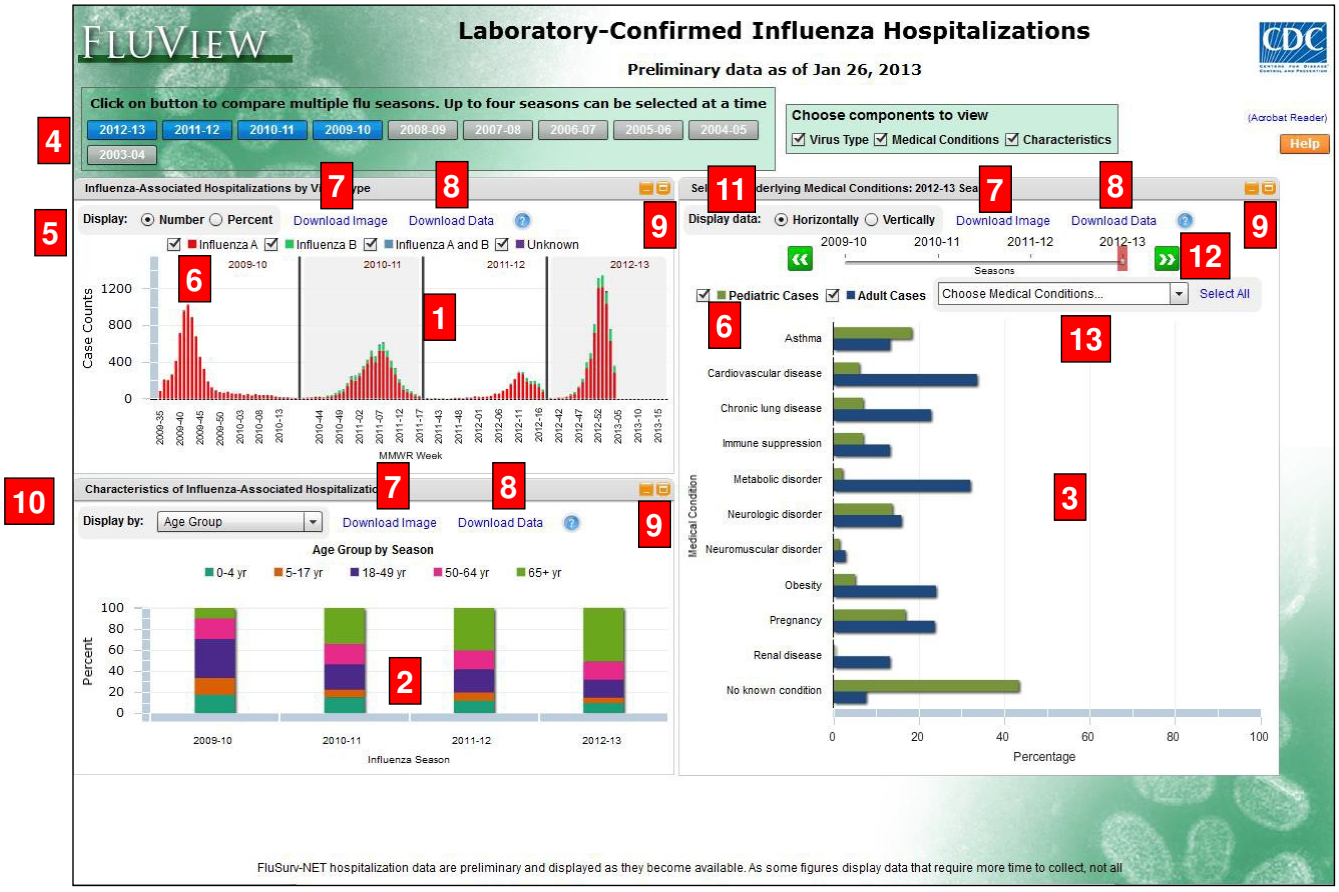
Application requirements:

- Internet Browser
  - Windows Internet Explorer 7 or later
  - Google Chrome
  - Mozilla Firefox
- Adobe Flash plug-in for internet browsers. This plugin can be downloaded at http://get.adobe.com/flashplayer/.

Once the website is loaded, a disclaimer dialog box will appear. Please review the disclaimer for important reference information. Click "Ok" to continue the FluView web application. Clicking on "Cancel" will take you to the CDC FluView weekly Flu report home page - http://www.cdc.gov/flu/weekly/.

Application Functions and Tool Overview

Below is an image of the default view of the current influenza season in the laboratory-confirmed influenza hospitalizations web application. This interactive tool allows users to display and query information about laboratory-confirmed influenza hospitalizations by flu type, underlying medical conditions, or other selected characteristics. The descriptions for each tool function are listed below the application image.



1. **Influenza Virus Type Graph** – This graph displays the virus type distribution of influenza-associated hospitalizations by week of hospitalization. Hovering over the graph will display information on virustype,

influenza season, MMWR week, and case count or virus type percent. Data can be displayed as number of cases or percent of cases with each virus type. When case counts are viewed in full-screen, the graph also includes a data table summarizing the number of cases by virus type by season.

2. **Characteristics Graph** – This graph displays the distribution of selected characteristics (i.e., age group, sex, intensive care unit admission, mechanical ventilation, pneumonia diagnosis, deaths, and antiviral treatment) of influenza-associated hospitalizations by season. Hovering over the graph will reveal a pop-up dialog providing information on the category selected, and the percent and count of hospitalizations.
3. **Medical Conditions Graph** – This chart displays the distribution of selected medical conditions associated with influenza severity among pediatric and adult influenza-associated hospitalizations by season. Hovering over the graph will reveal a pop-up dialog providing information on the age category, and on the percent and count of hospitalizations.
4. **Influenza Season Selection Tool** – These buttons allow the user to select up to four seasons of data to display. Selected buttons transform from grey to blue as they become active. At least one season must be selected in order for data to be displayed.
5. **Display as Number/Percent** – Data in the Influenza Virus Type Graph can be displayed as a number or percentage by using these radio buttons. Selecting "Number" displays the number of cases by virus type by week, while selecting "Percent" displays the percentage of that week's cases attributed to each virus type.
6. **Interactive Legend** – The interactive legend for the Influenza Virus Type Graph becomes active when data are displayed as numbers. Users can check which virus type(s) they would like displayed in the graph.
7. **Download Image** – To create a static image of the data displayed in your current view, click the "Download Image" push button. A file download dialog will appear with options to open, save, or discard (cancel) the currently displayed chart.
8. **Download Data** – To create a copy of the data in your current view or to create your own custom dataset, click the "Download Data" push button. The Download Data dialog will appear with two options: download the data shown in the graph (by selecting the first radio button) or create a custom download (by selecting the second radio button). Custom downloads allow you to select the data type (number or percent), flu virus type, and season for which you would like to see the data. Once the data selection has been made, click the Download Data push button to open, save or discard the comma separated values (*.csv) file.
9. **Resize Windows** – Each graph/chart window has orange buttons that will maximize, minimize, and restore the window when clicked.
10. **Display data by** – Specific characteristics can be displayed in the Characteristics Graph by using this drop-down menu. Data available include age group, sex, Intensive Care Unit (ICU) admission, mechanical ventilation, pneumonia diagnosis, deaths, and antiviral treatment.
11. **Display Data Horizontally/Vertically** – These radio buttons allow users to view the Underlying Medical Conditions Graph as either a horizontal or vertical bar graph.
12. **Influenza Season Slider Bar** – The slider bar is used to select the season displayed in the Underlying Medical Conditions Graph. Use the cursor or green and white arrows on either side of the slider bar to move the slider from one season to another.
13. **Medical Condition Selector** – Click on the drop-down menu to display the list of available underlying medical conditions. Users can display the frequency of one or more of the following conditions by clicking the box next to it: asthma, cardiovascular disease, chronic lung disease, immune suppression, metabolic disorder, neurologic disease, neuromuscular disease, obesity, pregnancy, renal diseases, and no known condition. Obesity is defined by BMI $\geq 30 kg/m^2$.